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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,740	04/17/2001	Robert Scott Morris		2801

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EXAMINER

KALAFUT, STEPHEN J

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 08/06/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

AS-10

Office Action Summary	Application No.	Applicant(s)	
	09/837,740	MORRIS ET AL.	
	Examiner	Art Unit	
	Steve Kalafut	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-43 is/are pending in the application.
- 4a) Of the above claim(s) 37 and 40-43 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38 and 39 is/are allowed.
- 6) ☒ Claim(s) 16-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

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Newly submitted claims 37 and 40-43 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The polymers recited in these claims do not include an oxygen atom next to another heteroatom, such as P or B. The polymers recited in former claims 1-10 include a group which is either *oxyphosphorus*, *oxyboron*, *oxysilicon* or *oxyaluminum* (emphasis added).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 37 and 40-43 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claims 16-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is no antecedent in claim 16 for "said linkage". The phrase "oxy-silicon group oxyboron", in claim 16, is confusing. Should the word "oxyboron" be preceded by a comma, and followed the word "group"? Claims 17-36 depend from claim 16 and would likewise be indefinite. Claim 35 recites the "polymer of claim 34", but claim 34 is drawn to an electrolyte. The word "electrolyte" following "polymer" in claim 35 is suggested.

Claims 16, 17, 22, 24, 25 and 34-36 are rejected under 35 U.S.C. 102(a) and (e) as being anticipated by Watanabe *et al.* (US 6,180,287), for reasons of record as applied to former claims 1, 6, 11 and 13.

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Claims 16, 17, 21, 24, 34 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Chaloner-Gill (US 5,393,621), for reasons of record as applied to former claims 1, 5 and 13.

Claims 16, 17, 32 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Ulrich *et al.* (US 6,472,104), for reasons of record as applied to former claims 1, 6, 11 and 13.

Claims 38 and 39 are allowed. The prior art does not disclose a polymer with having the structure recited in claim 38 (from which claim 39 depends), including one group which is either oxysilicon or oxytitanium; another group which is oxyphosphorus, oxyboron, or oxyaluminum; and a linkage including oxygen, silicon or nitrogen.

Claims 18, 19, 23, 26-31 and 33 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art does not disclose the present polymer which includes either alternating oxygen and nitrogen atoms; alternating oxygen and sulfur atoms; alternating nitrogen atoms and oxyphosphorus groups; nitrogen or phosphorus atoms having alkyl aryl or fluoroalkyl substituents; an oxyphosphorus group and a group which is either oxysilicon, oxyboron or oxyaluminum; or carbon links which include side chain substituents.

Claim 16 is objected to because of the following informalities: The word "oxyalumnum" should be "oxyaluminum". Appropriate correction is required.

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The disclosure is objected to because of the following informalities: While the specification contains examples of branched polymers, such as in Formula I (page 4) or in example 2 (page 7), which would support the new claim recitation "crosslinkage", the term is not explicitly recited in the text of the specification. Appropriate correction is required.

Applicant's arguments filed 6/2/03 have been fully considered but they are not persuasive.

Applicants argue that Watanabe *et al.* do not disclose a crosslinked polymer. Watanabe *et al.* teach that their polymer may or may not be crosslinked (column 3, lines 26-27), and give detailed instructions on how to produce the crosslinked version (column 8, starting at line 18).

Applicants argue that Watanabe *et al.* do not disclose the elements P, S, or N. The claims rejected under Watanabe *et al.* do not require all these to be present, but only N, S, or O, and a group which may be oxysilicon, oxyboron, oxyphosphorus or oxyaluminum. Watanabe *et al.* disclose silicon atoms which are connected to alkoxy groups (column 5, lines 51-65), which would produce linkages of Si-O-C, thus forming an oxysilicon group next to a carbon atom.

Applicants argue that Ulrich *et al.* do not disclose a crosslinked polymer. This is not persuasive because Ulrich *et al.* teach that their polymer has a "three-dimensional network structure" (column 4, lines 16-20), which would indicate that the polymer is crosslinked. Again, the claims rejected under Ulrich *et al.* do not require that P, S and N are all present, but only that N, S, or O is present, along with the oxysilicon, oxyboron, oxyphosphorus or oxyaluminum group. As seen in formula I (column 2, lines 48-61), each silicon atom may be bonded to 2 or 3

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oxygen atoms, and not only to carbon atoms. Ulrich *et al.* also disclose oxygen atoms linked by carbons, seen from the polyalkylene oxide groups (column 4, lines 16-32).

Applicants argue that Chaloner-Gill does not disclose any of the atoms Al, Ti, B, S, N, or Si in his polymer. The claims rejected under Chaloner-Gill do not require that these atoms are all present, only that N, S, or O is present, along with the oxyphosphorus groups. Linkages containing N, S, or O are shown in column 3, lines 44-66.

Applicants argue that Chaloner-Gill does not disclose a salt within the phosphorus polymer. Chaloner-Gill teaches that such a salt is present (column 4, lines 3-6) and gives numerous examples thereof (column 5, lines 35-46).

Chen *et al.*, Yasukawa *et al.*, Daroux *et al.*, Jacquet *et al.*, Cyba and Kolouch are withdrawn because these references do not teach their polymers to be crosslinked.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Kalafut whose telephone number is 703-308-0433. The examiner can normally be reached on Mon-Fri 8 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J Ryan can be reached on 703-308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

sjk
July 30, 2003

STEPHEN KALAFUT
PRIMARY EXAMINER
GROUP 1700

